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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2004*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-64* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-64* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to applicant's communication of March 25, 2004.

Original claims 1-64 are pending and have been examined. The rejections are stated

below.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims **1**, **3-4, 7, 32, 34-35, 38** and **63-64** are rejected under 35 U.S.C. 103(a) as

being unpatentable over **Fogel et al. [US Pub No. 2003/0115195 A1]** (hereinafter

referred to as Fogel) in view of **Spindler et al. [US Pub No. 2003/0181999 A1]**

(hereinafter referred to as Spindler).

4.   Regarding **claim 1**, Fogel discloses an apparatus for use in a real-time financial

market portfolio monitoring system, for continuously valuing a data collection comprising

a first plurality of data items, the apparatus comprising: storage means for storing the

first plurality of data items, said storage means further storing a second plurality of data

items, each data item of the first plurality having assigned a respective one of the data

items of the second plurality, each data item of the second plurality representing an

individual data item value. [0027]

Fogel discloses an interface module for establishing data connections to receive

input data. Fogel discloses a controller for controlling said interface module to connect

to one or more of at least two data sources to receive said input data. [0029]

Fogel does not explicitly disclose a processor for continuously updating data

items of the second plurality stored in said storage means based upon the received

input data, and calculating a data collection value for the data collection based on data

item values of the updated data items. However Spindler teaches based on the

calculated difference, processor continuously updates the set of data elements and the

processor may store the set of data elements within a storage medium [0040]. At the

time of the invention it would have been obvious to one of ordinary skill in the art to

modify the disclosure of Fogel to include the teachings of Spindler to obtain invention as

specified in claim 1. The rationale to combine the teachings would be for identifying

frequently-occurring data integrity issues.

5.   Regarding **claim 3**, Fogel discloses wherein said controller is adapted to control

said interface module to change said data connections based on a time-driven

schedule. [0029]

6.   Regarding **claim 4**, Fogel discloses wherein said controller is adapted to receive an input control signal to control said interface module to change said data connections in an event-driven manner based on said input control signal. [0029]

7.   Regarding **claim 7**, Fogel discloses wherein each data item value represented by one of the data items of the second plurality is of one of at least two data item types, and said storage means further stores a third plurality of data items, each data item of the second plurality having assigned a respective one of the data items of the third plurality, each data item of the third plurality identifying the data item type relating to the data item value represented by the corresponding data item of the second plurality. [0088, 0102, 0109]

8.   Regarding **claim 32**, it recites similar language as to claim 1 and is rejected on the same grounds.

9.   Regarding **claim 34**, it recites similar language as to claim 3 and is rejected on the same grounds.

10.   Regarding **claim 35**, it recites similar language as to claim 4 and is rejected on the same grounds.

11.   Regarding **claim 38**, it recites similar language as to claim 7 and is rejected on the same grounds.

12.   Regarding **claims 63** and **64**, each of these claims recite similar language as to claim 1 and is rejected on the same grounds.

13.   Claims **2**, **5-6**, **33**, and **36-37** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fogel et al. [US Pub No. 2003/0115195 A1]** in view of **Spindler et al. [US Pub No. 2003/0181999 A1]** and further in view of **Matus et al. [US Pub No. 2003/0233309 A1]** hereinafter referred to as Matus.

14.   Regarding **claim 2**, Fogel does not explicitly disclose wherein said data collection represents a portfolio of financial instruments, each data item of the first plurality comprises an identifier identifying at least one of said financial instruments, and the individual data item values represented by the data items of the second plurality indicate prices of the respective financial instruments. However Matus teaches receiving an identifier related to the financial instrument, and simultaneously providing prices related to the received identifier and a quantity of the financial instrument that can be traded related to at least one of the prices. [0070]

        At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to include the teachings of Matus to obtain

invention as specified in claim 2. The rationale to combine the teachings would be for

simultaneously providing values related to the identifier.

15.   Regarding **claim 5**, Fogel does not explicitly disclose wherein said processor is

capable of continuously updating a data item of the second plurality based upon input

data received substantially simultaneously from two or more data sources. However

Matus teaches an identifier related to a financial instrument, and simultaneously

provides prices related to the received identifier, and a quantity of the financial

instrument that can be traded related to at least one of the prices. [0077]

     At the time of the invention it would have been obvious to one of ordinary skill in

the art to modify the disclosure of Fogel to include the teachings of Matus to obtain

invention as specified in claim 5. The rationale to combine the teachings would be for

simultaneously providing values related to the identifier.

16.   Regarding **claim 6**, Fogel does not explicitly disclose wherein said processor is

further arranged to perform a calculation algorithm upon input data received from said

two or more data sources. However Matus teaches the user can calculate what values

the remaining fields would have based on this transaction percentage. A different

transaction percentage can be input or a value can be input into a different field (such

as the shares field independent of the transaction percentage) and the values of the

remaining fields can be calculated. [0042]

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to include the teachings of Matus to obtain invention as specified in claim 6. The rationale to combine the teachings would be for 0simultaneously providing values related to the identifier.

17.   Regarding **claim 8**, Fogel does not explicitly disclose wherein said processor is capable of calculating said data collection value based on data item values of different types. . However Matus teaches the user can calculate what values the remaining fields would have based on this transaction percentage. A different transaction percentage can be input or a value can be input into a different field (such as the shares field independent of the transaction percentage) and the values of the remaining fields can be calculated. [0042]

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to include the teachings of Matus to obtain invention as specified in claim 8. The rationale to combine the teachings would be for simultaneously providing values related to the identifier.

18.   Regarding **claim 33**, it recites similar language as to claim 2 and is rejected on the same grounds.

19.   Regarding **claim 36**, it recites similar language as to claim 5 and is rejected on the same grounds.

20.   Regarding **claim 37**, it recites similar language as to claim 6 and is rejected on the same grounds.

21.   Regarding **claim 39**, it recites similar language as to claim 8 and is rejected on the same grounds.

22.   Claims **9-11** and **40-42** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fogel et al. [US Pub No. 2003/0115195 A1]** in view of **Spindler et al. [US Pub No. 2003/0181999 A1]** and further in view of **Black et al. [US Patent No. 6,012,042]** hereinafter referred to as Black.

23.   Regarding **claim 9**, Fogel does not explicitly disclose wherein said input data comprises value information and unit information, and said processor is capable of converting values of different units into corresponding values of a predefined unit by applying appropriate conversion factors, before calculating said data collection value. However Black teaches an improved securities analysis system includes a data conversion device for converting both technical and fundamental data about a security into a unified format for analysis by an analysis process engine. [Abstract]

        At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to include the teachings of Black to obtain

invention as specified in claim 9. The rationale to combine the teachings would be for

transforming data into a unified format for analysis by an analysis process engine.

24.   Regarding **claim 10**, Fogel does not explicitly disclose wherein said input data

comprises value information, and said processor is capable of determining unit

information for the received value information dependent on the respective data source

or sources where said input data is received from, and converting values of different

units into corresponding values of a predefined unit by applying appropriate conversion

factors, before calculating said data collection value. However Black teaches an

improved securities analysis system includes a data conversion device for converting

both technical and fundamental data about a security into a unified format for analysis

by an analysis process engine. [Abstract]

        At the time of the invention it would have been obvious to one of ordinary skill in

the art to modify the disclosure of Fogel to include the teachings of Black to obtain

invention as specified in claim 10. The rationale to combine the teachings would be for

transforming data into a unified format for analysis by an analysis process engine.

25.   Regarding **claim 11**, Fogel does not explicitly disclose wherein said input data

further comprises rate information indicating said conversion factors. However Black

teaches an improved securities analysis system includes a data conversion device for

converting both technical and fundamental data about a security into a unified format for

analysis by an analysis process engine. The analysis process engine processes the

disparate data in accordance with a set of rules and the results are forwarded to a display for viewing or used in further analysis. [Col. 13 lines 32-42]

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to include the teachings of Black to obtain invention as specified in claim 11. The rationale to combine the teachings would be for transforming data into a unified format for analysis by an analysis process engine.

26.   Regarding **claim 40,** it recites similar language as to claim 9 and is rejected on the same grounds.

27.   Regarding **claim 41**, it recites similar language as to claim 10 and is rejected on the same grounds.

28.   Regarding **claim 42**, it recites similar language as to claim 11 and is rejected on the same grounds.

29.   Claims **12** and **43** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fogel et al. [US Pub No. 2003/0115195 A1]** in view of **Spindler et al. [US Pub No. 2003/0181999 A1]** and **Black et al. [US Patent No. 6,012,042]**, and further in view of **Brandenburg et al. [US Pub No. 2006/0077904 A1]** hereinafter referred to as Brandenburg.

30.   Regarding **claim 12**, Fogel does not explicitly disclose wherein said interface

module is capable of establishing different data connections to receive said value

information and said rate information. However Brandenburg teaches processing of

data packets from different data connections with different transmission bit rates. [0011]

        At the time of the invention it would have been obvious to one of ordinary skill in

the art to modify the disclosure of Fogel to include the teachings of Brandenburg to

obtain invention as specified in claim 12. The rationale to combine the teachings is to

more efficiently transfer data.

31.   Regarding **claim 43**, it recites similar language as to claim 12 and is rejected on

the same grounds.

32.   Claims **13** and **44** are rejected under 35 U.S.C. 103(a) as being unpatentable

over **Fogel et al. [US Pub No. 2003/0115195 A1]** in view of **Spindler et al. [US Pub

No. 2003/0181999 A1]** and **Black et al. [US Patent No. 6,012,042]**, and further in view

of **Wang [US Patent No. 7,305,422]**.

33.   Regarding **claim 13**, Fogel does not explicitly disclose wherein said processor is

arranged to update said data items of the second plurality based upon received rate

information even if no value information is received, and recalculate said data collection

value based on data item values of the updated data items. However Wang discloses a

program that performs computationally intensive calculations uses a particular piece of

data that is stored as a data item in a database. Using the techniques described herein,

the calculations may be performed as a transaction within a database server that

manages the data item. During the execution of the calculations, the server may

perform a series of updates to this data item. Prior to each update of the data item, the

database server generates a record that reflects the state of the data item. During

subsequent phases of the calculations, the calculations may require previous values of

the data item.   [Col. 2 lines 16-28]

At the time of the invention it would have been obvious to one of ordinary skill in

the art to modify the disclosure of Fogel to include the teachings of Wang to obtain

invention as specified in claim 13. The rationale to combine the teachings would be for

effective processing of computationally intensive calculations.

34.   Regarding **claim 44**, it recites similar language as to claim 13 and is rejected on

the same grounds.

32.   Claims **14, 16, 45** and **47** are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Fogel et al. [US Pub No. 2003/0115195 A1]** in view of **Spindler et**

al. [US Pub No. 2003/0181999 A1], and further in view of **Vishnubhotla [US Pub No.**

2004/0010505 A1].

33.   Regarding **claim 14**, Fogel does not explicitly disclose wherein said processor is

adapted to calculate said data collection value also based on at least one estimation

value obtained by applying a predefined value determination algorithm, in case a data item value is not available. However Vishnubhotla discloses predefined data mining algorithms comprise a radial basis function algorithm for value prediction and the production scored data comprises a prediction field containing a value calculated by executing the data mining algorithm in scoring mode. [Page 14, claim 12]

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to include the teachings of Vishnubhotla to obtain invention as specified in claim 14. The rationale to combine the teachings is to make the process more efficient and more consistent.

34.   Regarding **claim 16**, Fogel does not explicitly disclose wherein said processor is adapted to calculate said data collection value also based on at least one estimation value in case a data item value is not available, said estimation value being obtained from either a configuration file stored in said storage means or from received input data. a predefined value determination algorithm, in case a data item value is not available. However Vishnubhotla discloses predefined data mining algorithms comprise a radial basis function algorithm for value prediction and the production scored data comprises a prediction field containing a value calculated by executing the data mining algorithm in scoring mode. [Page 14, claim 12]

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to include the teachings of Vishnubhotla to

obtain invention as specified in claim 16. The rationale to combine the teachings is to make the process more efficient and more consistent.

35.   Regarding **claim 45**, it recites similar language as to claim 14 and is rejected on the same grounds.

36.   Regarding **claim 47**, it recites similar language as to claim 16 and is rejected on the same grounds.

37.   Claims **15** and **46** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fogel et al. [US Pub No. 2003/0115195 A1]** in view of **Spindler et al. [US Pub No. 2003/0181999 A1]** and Vishnubhotla **[US Pub No. 2004/0010505 A1]** and further in view of **Gershon [US Pub No. 2005/0027634 A1].**

38.   Regarding **claim 15**, Fogel does not explicitly disclose wherein said predefined value determination algorithm comprises an implementation of the Balck-Scholes formula. However Gershon teaches calculating a theoretical value (IV) using a combination of known algorithms, e.g., based on the Black-Scholes model [0057]. At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to include the teachings to obtain invention as specified in claim 15. The rationale to combine the teachings is because Black-Scholes model is the common benchmark in the industry for pricing derivatives.

39.   Regarding **claim 46**, it recites similar language as to claim 15 and is rejected on the same grounds.

40.   Claims **17-18** and **48-49** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fogel et al. [US Pub No. 2003/0115195 A1]** in view of **Spindler et al. [US Pub No. 2003/0181999 A1],** and further in view of **Naka et al. [US Pub No. 2002/0083238 A1]** hereinafter referred to as Naka.

41.   Regarding **claim 17**, Fogel does not explicitly disclose wherein said storage means further stores amount data indicating an individual amount assigned to each of said data items of the first plurality. However Naka teaches a storing-reproducing apparatus with this structure is capable of automatically optimizing the bit rate in order to completely store target data in the available space in the storage medium [0035]. At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to include the teachings of Naka to obtain invention as specified in claim 17. The rationale to combine the teachings would be for improving the operability of the apparatus for the user.

42.   Regarding **claim 18**, Fogel does not explicitly disclose wherein said processor is adapted to adjust the amount data of at least one data item in response to a corporate action. However Naka teaches a storing-reproducing apparatus with this structure is

capable of automatically optimizing the bit rate in order to completely store target data in

the available space in the storage medium [0035]. At the time of the invention it would

have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to

include the teachings of Naka to obtain invention as specified in claim 18. The rationale

to combine the teachings would be for improving the operability of the apparatus for the

user.

43.   Regarding **claim 48**, it recites similar language as to claim 17 and is rejected on

the same grounds.

44.   Regarding **claim 49**, it recites similar language as to claim 18 and is rejected on

the same grounds.

45.   Claims **19** and **50** are rejected under 35 U.S.C. 103(a) as being unpatentable

over **Fogel et al. [US Pub No**. **2003/0115195 A1]** in view of **Spindler et al. [US Pub**

No. 2003/0181999 A1] and Naka **et al. [US Pub No. 2002/0083238 A1]** and further in

view of **Nakajima et al. [US Pub No**. **2002/0198870 A1]** hereinafter referred to as

Nakajima**.**

46.   Regarding **claim 19**, Fogel does not disclose wherein said processor is adapted

to determine a synthetic value of at least one data item of the second plurality by

adjusting existing data item values in case of a corporate action, and calculate said data

collection value also based on said synthetic value. However Nakajima teaches a

result-of-search list page on the basis of the fitting value calculation target property

information suite and a synthetic fitting value suite obtained by calculating the synthetic

fitting values with respect to the respective pieces of property information that form the

fitting value calculation target property information suite [0118]. At the time of the

invention it would have been obvious to one of ordinary skill in the art to modify the

disclosure of Fogel to include the teachings of Nakajima to obtain invention as specified

in claim 19. The rationale to combine the teachings is to easily determine a synthetic

value.

47.   Regarding **claim 50**, it recites similar language as to claim 19 and is rejected on

the same grounds.

48.   Claims **20-24** and **51-55** are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Fogel et al. [US Pub No. 2003/0115195 A1]** in view of **Spindler et

al. [US Pub No. 2003/0181999 A1],** and further in view of **Gotz et al. [US Pub No.

2004/0034699 A1]** hereinafter referred to as Gotz.

49.   Regarding **claim 20**, Fogel does not explicitly disclose wherein said processor is

adapted to apply a filter algorithm on the received input data before updating the data

items of the second plurality, said filter algorithm being configured to enable said

processor to block input data that would, after having updated data items of the second

plurality, lead to data item values significantly deviating from respective previous data item values, or from predefined reference values. However Gotz discloses a filter condition is received from a user. The filter condition includes at least one value of an attribute occurring in one or more data collections in the first data management system and one or more data collections in the second data management system. A first group of values of attributes that uniquely identify a single data collection from the other data collections is extracted from the leading data management system. Each value extracted is associated with a data collection that meets the filter condition. A second group of values of attributes that uniquely identify a single data collection from the other data collections is extracted from the contrast data management system. The first group of values of the uniquely identifying attribute is compared with the second group of values of the uniquely identifying attribute to determine whether each value of the uniquely identifying attribute in the first group represents the same data collection as a value of the uniquely identifying attribute in the second group. [0022]

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to include the teachings of Gotz to obtain invention as specified in claim 20. The rationale to combine the teachings would be to more efficiently manage the integrity of data.

50.   Regarding **claim 21**, Fogel does not explicitly disclose wherein said processor is adapted to apply a filter algorithm on calculated data collection values, said filter algorithm being configured to enable said processor to block a calculated data collection

value that significantly deviates from a previous data collection value, or from a predefined reference value. However Gotz discloses a filter condition is received from a user. The filter condition includes at least one value of an attribute occurring in one or more data collections in the first data management system and one or more data collections in the second data management system. A first group of values of attributes that uniquely identify a single data collection from the other data collections is extracted from the leading data management system. Each value extracted is associated with a data collection that meets the filter condition. A second group of values of attributes that uniquely identify a single data collection from the other data collections is extracted from the contrast data management system. The first group of values of the uniquely identifying attribute is compared with the second group of values of the uniquely identifying attribute to determine whether each value of the uniquely identifying attribute in the first group represents the same data collection as a value of the uniquely identifying attribute in the second group. [0022]

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to include the teachings of Gotz to obtain invention as specified in claim 21. The rationale to combine the teachings would be to more efficiently manage the integrity of data.

51.   Regarding **claim 22**, Fogel does not explicitly disclose an output module for outputting calculated data collection values to one or more recipients, wherein said processor is adapted to inhibit a blocked data collection value from being output. .

However Gotz discloses a filter condition is received from a user. The filter condition

includes at least one value of an attribute occurring in one or more data collections in

the first data management system and one or more data collections in the second data

management system. A first group of values of attributes that uniquely identify a single

data collection from the other data collections is extracted from the leading data

management system. Each value extracted is associated with a data collection that

meets the filter condition. A second group of values of attributes that uniquely identify a

single data collection from the other data collections is extracted from the contrast data

management system. The first group of values of the uniquely identifying attribute is

compared with the second group of values of the uniquely identifying attribute to

determine whether each value of the uniquely identifying attribute in the first group

represents the same data collection as a value of the uniquely identifying attribute in the

second group. [0022]

At the time of the invention it would have been obvious to one of ordinary skill in

the art to modify the disclosure of Fogel to include the teachings of Gotz to obtain

invention as specified in claim 22. The rationale to combine the teachings would be to

more efficiently manage the integrity of data.

52.   Regarding **claim 23**, Fogel does not explicitly disclose an output module for

outputting calculated data collection values to one or more recipients, wherein said

processor is adapted to control said output module to output a blocked data collection

value together with a flag indicating that the output data collection value is unconfirmed.

However Gotz discloses a filter condition is received from a user. The filter condition includes at least one value of an attribute occurring in one or more data collections in the first data management system and one or more data collections in the second data management system. A first group of values of attributes that uniquely identify a single data collection from the other data collections is extracted from the leading data management system. Each value extracted is associated with a data collection that meets the filter condition. A second group of values of attributes that uniquely identify a single data collection from the other data collections is extracted from the contrast data management system. The first group of values of the uniquely identifying attribute is compared with the second group of values of the uniquely identifying attribute to determine whether each value of the uniquely identifying attribute in the first group represents the same data collection as a value of the uniquely identifying attribute in the second group. [0022]

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to include the teachings of Gotz to obtain invention as specified in claim 23. The rationale to combine the teachings would be to more efficiently manage the integrity of data.

53.   Regarding **claim 24**, Fogel does not explicitly disclose a user interface module connected to receive user input data indicative of instructions to change the blocking behaviour and/or adjust deviation limits of said filter algorithm. However Gotz teaches a filter condition may be user-definable. A filter condition may include one or more values

for one or more attributes associated with a data collection or may include one or more values for an attribute that uniquely identifies a data collection. [0016]

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to include the teachings of Gotz to obtain invention as specified in claim 24. The rationale to combine the teachings would be to more efficiently manage the integrity of data.

54.   Regarding **claim 51**, it recites similar language as to claim 20 and is rejected on the same grounds.

55.   Regarding **claim 52**, it recites similar language as to claim 21 and is rejected on the same grounds.

56.   Regarding **claim 53**, it recites similar language as to claim 22 and is rejected on the same grounds.

54.   Regarding **claim 54**, it recites similar language as to claim 23 and is rejected on the same grounds.

55.   Regarding **claim 55**, it recites similar language as to claim 24 and is rejected on the same grounds.

56.   Claims **25-28** and **56-59** are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Fogel et al. [US Pub No. 2003/0115195 A1]** in view of **Spindler et**

al. [US Pub No. 2003/0181999 A1], and further in view of **Lipscher et al. [US Pub No.**

2004/0102971 A1] hereinafter referred to as Lipscher.

57.   Regarding **claim 25**, Fogel does not explicitly disclose an output module for

outputting calculated data collection values to one or more recipients, wherein said

processor is adapted to convert calculated data collection values by applying

appropriate unit conversion factors, before controlling said output module to output the

values. However Lipscher teaches input may be any form of input produced by a

human or communication form suitable for human-to-human communication. Examples

may include voice, speech, gestures, handwriting, facial expression, or a

drawing/sketch/schematic. Symbolic data are collections of values that can represent

data in a computer. Examples may include words, phrases, letters, numbers, unicode

symbols, values for database record, computer program variable values, and computer

program variable addresses. Symbolic data output may be output by the system, stored

by the system, displayed by the system, or transmitted to another system. However, the

symbolic data and natural input may take various forms. Further, various conversions

may be envisaged. [0031]

        At the time of the invention it would have been obvious to one of ordinary skill in

the art to modify the disclosure of Fogel to include the teachings of Lipscher to obtain

invention as specified in claim 25. The rationale to combine the teachings would be for

easily generating symbolic data from the input data.

58.   Regarding **claim 26**, Fogel does not explicitly disclose wherein said processor is

configured to apply multiple unit conversion factors for different currencies to calculate

multiple data collection values for individual recipients. . However Lipscher teaches

input may be any form of input produced by a human or communication form suitable

for human-to-human communication. Examples may include voice, speech, gestures,

handwriting, facial expression, or a drawing/sketch/schematic. Symbolic data are

collections of values that can represent data in a computer. Examples may include

words, phrases, letters, numbers, unicode symbols, values for database record,

computer program variable values, and computer program variable addresses.

Symbolic data output may be output by the system, stored by the system, displayed by

the system, or transmitted to another system. However, the symbolic data and natural

input may take various forms. Further, various conversions may be envisaged. [0031]

        At the time of the invention it would have been obvious to one of ordinary skill in

the art to modify the disclosure of Fogel to include the teachings of Lipscher to obtain

invention as specified in claim 26. The rationale to combine the teachings would be for

easily generating symbolic data from the input data.

59.   Regarding **claim 27**, Fogel does not explicitly disclose wherein said input data

comprises rate information enabling said processor to determine said unit conversion

factors. However Lipscher teaches input may be any form of input produced by a human or communication form suitable for human-to-human communication. Examples may include voice, speech, gestures, handwriting, facial expression, or a drawing/sketch/schematic. Symbolic data are collections of values that can represent data in a computer. Examples may include words, phrases, letters, numbers, unicode symbols, values for database record, computer program variable values, and computer program variable addresses. Symbolic data output may be output by the system, stored by the system, displayed by the system, or transmitted to another system. However, the symbolic data and natural input may take various forms. Further, various conversions may be envisaged. [0031]

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to include the teachings of Lipscher to obtain invention as specified in claim 27. The rationale to combine the teachings would be for easily generating symbolic data from the input data.

60.   Regarding **claim 28**, Fogel does not explicitly disclose a user interface module connected to receive user input data indicative of instructions to change at least one of said unit conversion factors. However Lipscher teaches input may be any form of input produced by a human or communication form suitable for human-to-human communication. Examples may include voice, speech, gestures, handwriting, facial expression, or a drawing/sketch/schematic. Symbolic data are collections of values that can represent data in a computer. Examples may include words, phrases, letters,

numbers, unicode symbols, values for database record, computer program variable values, and computer program variable addresses. Symbolic data output may be output by the system, stored by the system, displayed by the system, or transmitted to another system. However, the symbolic data and natural input may take various forms. Further, various conversions may be envisaged. [0031]

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to include the teachings of Lipscher to obtain invention as specified in claim 28. The rationale to combine the teachings would be for easily generating symbolic data from the input data.

61.   Regarding **claim 56**, it recites similar language as to claim 25 and is rejected on the same grounds.

62.   Regarding **claim 57**, it recites similar language as to claim 26 and is rejected on the same grounds.

63.   Regarding **claim 58**, it recites similar language as to claim 27 and is rejected on the same grounds.

64.   Regarding **claim 59**, it recites similar language as to claim 28 and is rejected on the same grounds.

65.   Claims **29-31** and **60-62** are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Fogel et al. [US Pub No. 2003/0115195 A1]** in view of **Spindler et**

al. [US Pub No. 2003/0181999 A1], and further in view of **Odenwalder et al. [US Pub**

No. 2003/0031149 A1] hereinafter referred to as Odenwalder.

66.   Regarding **claim 29**, Fogel does not explicitly disclose wherein said processor is

adapted to recalculate previously calculated data collection values based on correction

data indicating at least one corrected data item value of the second plurality. However

Odenwalder discloses a receiving device includes means for receiving a transmission

over at least one time slot, the transmission comprising data and a value calculated

from the data, recalculation means for recalculating the value from the received data,

and determination means for determining the number of time slots of the transmission

from the calculated and recalculated values [0013]. At the time of the invention it would

have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to

include the teachings of Odenwalder to obtain invention as specified in claim 29. The

rationale to combine the teachings would be for proactively correcting calculated values.

67.   Regarding **claim 30**, Fogel does not explicitly disclose wherein said correction

data is comprised in said input data. However Odenwalder discloses a receiving device

includes means for receiving a transmission over at least one time slot, the transmission

comprising data and a value calculated from the data, recalculation means for

recalculating the value from the received data, and determination means for determining

the number of time slots of the transmission from the calculated and recalculated values

[0013]. At the time of the invention it would have been obvious to one of ordinary skill in

the art to modify the disclosure of Fogel to include the teachings of Odenwalder to

obtain invention as specified in claim 30. The rationale to combine the teachings would

be for proactively correcting calculated values.

68.   Regarding **claim 31**, Fogel does not explicitly disclose a user interface module

connected to receive user input data indicative of said correction data. However

Odenwalder discloses a receiving device includes means for receiving a transmission

over at least one time slot, the transmission comprising data and a value calculated

from the data, recalculation means for recalculating the value from the received data,

and determination means for determining the number of time slots of the transmission

from the calculated and recalculated values [0013]. At the time of the invention it would

have been obvious to one of ordinary skill in the art to modify the disclosure of Fogel to

include the teachings of Odenwalder to obtain invention as specified in claim 31. The

rationale to combine the teachings would be for proactively correcting calculated values.

69.   Regarding **claim 60**, it recites similar language as to claim 29 and is rejected on

the same grounds.

70.   Regarding **claim 61**, it recites similar language as to claim 30 and is rejected on

the same grounds.

71.   Regarding **claim 62**, it recites similar language as to claim 31 and is rejected on

the same grounds.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to KEVIN POE whose telephone number is (571)272-9789.

The examiner can normally be reached on Monday-Thursday 9:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, James Kramer can be reached on 571-272-6783. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James A. Kramer/
Supervisory Patent Examiner, Art Unit 3693

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